DEDICATION

Dedicated To My Family , Specially Dr.Bilal Khan and all those who sacrifice their present for the better future of Pakistan

ABSTRACT

Different formulations of EPDM based composite were synthesized to achieve a composition that gives best mechanical properties. Silica, alumina, ATH, MDH, Kevlar chips, phenolic resin were used as reinforcements in EPDM. Woven Kevlar fiber (armour grade), Nomex fiber, Silicon carbide coated woven Kevlar fiber have been used to formulate the laminate structure with EPDM. Kevlar fiber a product of Dupont, which has best mechanical properties in all fiber family and EPDM, has low density and high shock absorbance properties. The composite with woven Kevlar fiber gives good mechanical properties but silicon carbide coated woven Kevlar fiber embedded in EPDM gives the best result regarding mechanical properties. This composite has an impact strength of 303 KJ/m^2 i.e. three times more than mild steel; it has also high tensile strength i.e. 2190 Psi.

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